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## THE HEROINES OF BURNS.

It is generally known that the fine impassioned songs of Burns were mostly written with regard to real women—in some instances, of no great beauty in the world's estimation, and in most of very humble rank, but almost always genuine flesh-and-blood women of this world, whom the poet was pleased to admire for the time being. In this respect he was very different from the poets of a former age, with their supposititious Daphnes and Phillises—with Burns, to quote a line of old MacLaurin, Lord Dreghorn,

"— Nelly, not Neera, was her name."

Plain, downright Annies and Nannies, and Tibbies and Jeanies, they were every one of them. He was a great poet—more particularly a great lyrical poet—perhaps we may say the very greatest that has ever lived; and wherever he had been born, there was it certain that the women, whether in silk or drugged, must have been made immortal. He rose in Kyle, amongst a simple peasantry, the female part of which wore short gowns and sometimes no stockings, and were accustomed to wield the muck-fork and the sickle, like the men themselves. But then it was Burns who had alighted amongst them, and the haberdashery of the imagination was ready to deck every one of them as finely as if they had been Sacharissas or Vanessas. It may afford some amusement to the reader to be introduced to such particulars of these persons as have been handed down to us.

We have the poet's own authority, that the first flame in his bosom was kindled in his fifteenth autumn by "a bonnie sweet souse lass," who was assigned to him as his partner on the harvest-field. She was unwitting at first of the power she had acquired over him, and he himself did not know, as he tells us, "why he liked so much to loiter behind with her, when returning in the evening from their labours; why the tones of her voice made his heart-strings thrill like an Æolian harp; and particularly why his pulse beat such a furious rattan when he looked and fingered over her little hand, to pick out the cruel nettle-stings and thistles." Love brought poetry to its aid, and he now composed his first verses, beginning "Once I loved a bonnie lass, and aye I love her still"—a very poor set of rhymes truly, but curious as the first tunings of so sweet an instrument. Her name appears to have been Nelly Blair, and, like many of his subsequent flames, she was a house-servant. The daughter of an individual in whose house she at one time served, communicated, through a newspaper, a few years ago, her recollections of Burns's visits on the occasions when "rockings" were held in the house. These were meetings of the rustic youth of both sexes, at which the lasses plied their spinning-wheels (formerly their rocks—hence the name) and the lads knitted stockings, the entertainment consisting of songs, and a light supper of country fare. Often did this lady meet Burns at the head of a little troop, coming from a distance of three or four miles, to attend these meetings, with the spinning-wheel of some lass over his shoulder, and a hundred jokes in his mouth to keep the party in merriment. Often had the lady of the house to find fault with her damsels next day, for their lack of alacrity, the result of Burns's too late sitting at his courtship with Nelly Blair.

Another of his very early Dulcineas was a certain Isabella Steven or Stein, who lived near his father's farm of Lochlee. He was then about seventeen. But, alas, she was an heiress—her father a laird; that is to say, the proprietor of probably twenty acres of moorland, with a cot-house and garden. She therefore looked

high, and the consequence was that the poet had occasion to write his song—

"Oh, Tibbie, I have seen the day,  
Ye wadna been sae shy;  
For lack o' gear ye lightly me,  
But troth I carena by.  
Yestreen I met you on the muir,  
Ye spakna, but gae'd by like stour;  
Ye geck at me because I'm poor,  
But sent a hair care I," &c.

Thus we find that in the humblest spheres of life, there are nice distinctions of grade; altogether unrecognisable, possibly, to one observing at a little distance, like that between stars of the fifteenth and sixteenth magnitudes, yet with immense gulfs between, for all that. Tibbie, by virtue of her father's two or three fields, passed like stout the tenant's son whose name was ultimately to be great in both hemispheres.

His next serious fit of passion took its rise while he was studying mensuration at Kirkoswald. The fair maid's name was Peggy Thomson, and he celebrates her in his song "Now westlin win's and slaughtering guns:" she became the wife of a person named Neilson, and long lived in Ayr. But the particulars of this case need not be here entered into, as they have already been introduced to our readers.\*

About the time when he was two or three and twenty, his attachments came in such thick and rapid succession, that there is no individualising them. Scarce a lass existed in the happy parish of Tarbolton who had not been a transient object of worship to Robert Burns. There was one whom he celebrates under the name of Montgomery's Peggy. To this girl, who had been reared in rather an elegant way, he made love, merely to show his parts in courtship; he got really in love, and was then refused. "It cost me several heartaches," he says, "to get rid of the affair." Another, named Anne Ronald, the daughter of a farmer, is said to have been the "Annie" of his lively song of "the Rigs o' Barley." The heroine of "My Nannie O," that most exquisite of songs, was Agnes Fleming, the daughter of a farmer at Caldecotill, near Lochlee, and at one time a servant.

"Her face is fair, her heart is true,  
As spotless as she's bonnie, O;  
The opening gowan, wat wi' dew,  
Nae purer is than Nannie, O."

Was ever rural maid so canonised! He was not only a lover himself, but an abettor of the loves of others. "A country lad," he says, "seldom carries on a love adventure without an assisting confidant. I possessed a curiosity, zeal, and intrepid dexterity, that recommended me as a proper second on these occasions; and I dare say I felt as much pleasure in being in the secret of half the loves of Tarbolton parish, as ever did statesman in knowing the intrigues of half the courts of Europe." We once conversed with an aged man in Tarbolton, who had served Burns partly in the same capacity; they would go together at night to houses in which lived girls admired by the poet; and these girls it was the duty of John Lees to ask out for his friend, who meanwhile waited near the door. When he had succeeded in bringing out any favourite lass of the poet, he became of course *Monsieur de Trop*, and Burns would then say to him, "Now, Jock, you may gang hame." The old man seemed greatly to relish his recollections of these adventures.

At about four-and-twenty, while still assisting his father in the small poor farm of Lochlee, he became acquainted with the young woman whom he addresses in several of his published letters as "My dear E—." From these letters he appears to have at first made

sure of obtaining the young woman's hand, but to have been finally rejected. It is probable that this person was the heroine of his song, "From thee, Eliza, I must go," which seems to have been written when he contemplated leaving her for a distant clime. The letters are in surprisingly pure English, and of a more moderate and rational complexion than the most of his compositions of that class, while the song ranks with his best.

"Farewell, farewell, Eliza dear,  
The maid that I adore;  
A boding voice is in my ear,  
We part to meet no more.  
The latest thro' that leaves my heart,  
While death stands victor by,  
That thro', Eliza, is thy part,  
And thine that latest sigh."

Eliza long survived the poet, and, if we may judge from the following obituary notice of her, she must have been a person somewhat above the common standard. "At Alva, on the 28th ult.," in the 74th year of her age, Mrs Elizabeth Black, relict of the late Mr James Stewart, vintner there. Though called upon to discharge the uncongenial duties connected with a humble public-house, and early deprived of her partner, Mrs Stewart, in her guarded walk and conversation, during the many years she spent in Alva, threw such a moral halo around her character as secured for her the unceasing esteem and good wishes of her fellow-villagers. \* \* She was Burns's ELIZA. She was born and brought up in Ayrshire, and in the bloom of youth was possessed of no ordinary share of personal charms. \* \* She early became acquainted with Burns, and made no small impression on his heart. \* \* She possessed several love-epistles he had addressed to her. It was when Scotia's bard intended emigrating from his own to a foreign shore that he wrote the stanzas beginning, 'From thee, Eliza, I must go'—the subject being of course Elizabeth Black."

This brings us to Highland Mary, the most interesting of all Burns's heroines. He was now the joint tenant with his brother of the little farm of Mossgiel, in the parish of Mauchline. Mary Campbell, for such was her name, was as lowly a lass as any whom he ever admired, being the dairy-woman at Colonel Montgomery's house of Coilsfield. There is a thorn near the house, beneath whose boughs the poet lover often met his simple mistress. He celebrates her charms, and the happiness he enjoyed from these stolen interviews, in the song of "the Highland Lassie."

"Nae gentle dames, though e'er so fair,  
Shall ever be my muse's care,  
Their titles a' are empty show,  
Gie me my Highland lassie, O.  
Oh, were yon hills and valleys mine,  
Yon palace and yon gardens fine,  
The world then the love should know,  
I bear my Highland lassie, O."

The design of going in search of fortune to the West Indies was still upon him, and he is found asking this mistress if she will accompany him:—

"Will ye go to the Indies, my Mary,  
And leave auld Scotia's shore,  
Will ye go to the Indies, my Mary,  
Across the Atlantic's roar?"

At length he resolved to marry her, and endeavour to remain contented at home; and they met on the banks of the Ayr, "to live one day of parting love," previous to a visit which she was to pay, in anticipation of her marriage, to her relations in Argyle.

\* In the 304th number of the Journal, published November 25, 1837.

\* The year is recent, but unknown, in consequence of the notice having been cut carelessly from a newspaper. It was probably about 1837.

shire. In the song of "Highland Mary," the history of this precious day is written in immortal light. Mary, as is well known, sickened and died at her father's house in Greenock, leaving to the poet an image which never forsook him in all his after days, whether of joy or sorrow. Six or seven years afterwards, when a married man at Ellisland, he observed the anniversary of her death in a way which showed the depth of his feelings respecting her. In the evening, he retired to his stack-yard, in a state of great apparent dejection, and threw himself on a mass of straw, with his face upturned to the sky. There he lay for hours, notwithstanding the kind remonstrances of his wife. When he came into the house, he wrote down, with the facility of one copying from memory, the grandly melancholy hymn beginning,

"Thou lingering star, with lessening ray."

We have treated Highland Mary shortly, for her story has been often told. We shall afford more space to the lady who next presided over the imagination of the bard—the celebrated Jean Armour. The father of this young woman was a master mason or builder, of some substance, in the village of Mauchline. She was rather above the middle stature, of dark complexion, and irregular features, but of a fine figure, and great gentleness of nature, and a very agreeable singer and dancer. According to her own story, she and Burns first saw each other as she was one day spreading out clothes on the green to be bleached. As he passed by, his dog ran over some of the clothes; she called to the animal in no gracious terms, and requested his master to take him off. The poet made a sportive allusion to the old saying of "Love me, love my dog," and some badinage was interchanged. Probably neither knew on this occasion who the other was; but their acquaintance was not to stop short here. We are enabled to continue its history by John Blane, a decent old man now residing in Kilmarnock, who was at this time Burns's plough-boy and bed-fellow. There was a singing-school at Mauchline, which Blane attended. Jean Armour was also a pupil, and he soon became aware of her superior natural gifts as a vocalist. One night there was a "rocking" at Mossiel, where a lad named Ralph Sillar sang a number of songs in what was considered rather good style. When Burns and Blane had retired to their sleeping-place in the stable-loft, the former asked the latter what he thought of Sillar's singing, to which Blane answered that the lad thought so much of it himself, and had so many airs about it, that there was no occasion for others expressing a favourable opinion—yet, he added, "I would not give Jean Armour for a score of him." "You are always talking of this Jean Armour," said Burns; "I wish you could contrive to bring me to see her." Blane readily consented to do so; and next evening, after the plough was loosed, the two proceeded to Mauchline for that purpose. Burns went into a public-house, and Blane went into the singing-school, which chanced to be kept in the floor above. When the school was dismissing, Blane asked Jean Armour if she would come to see Robert Burns, who was below, and anxious to speak to her. Having heard of his poetical talents, she said she would like much to see him, but was afraid to go without a female companion. This difficulty being overcome by the frankness of a Miss Morton—the Miss Morton of the Six Mauchline Belles—Jean went down to the room where Burns was sitting, and from that time her fate was fixed.

The subsequent history of this pair is well known. Jean ultimately became the poet's wife, and the partner of all of weal or woe which befell him during the Ellisland and Dumfries periods of his life. It is rather remarkable that, excepting two or three passing allusions, Jean was not the subject of any poetry by Burns during the earlier period of their acquaintance, nor till they were seriously and steadfastly married. He then, however, made up for his former silence. It was during the honeymoon, as he himself tells us, and probably while preparing a home for her on the banks of the Nith, that he composed his charming song in her praise—

"Of a' the airts the wind can blaw,  
I dearly like the west,  
For there the bonnie lassie lives,  
The lassie I loe best;  
Though wild woods grow, and rivers row,  
Wi' mony a hill between,  
Yet day and night my fancy's flight  
Is ever wi' my Jean.  
I see her in the dewy flowers,  
See lovely, fresh, and fair,  
I hear her in the tuncful birds  
Wi' music charm the air;  
There's no a bonnie flower that springs,  
By fountain, shaw, or grove,  
Nor yet a bonnie bird that sings,  
But minds me o' my Jean."

Not long afterwards, he infused his love for her into the still more passionate verses beginning, "Oh, were I on Parnassus Hill!" of which one half stanza conveys a description certainly not surpassed, and we are inclined to think not even approached, in the whole circle of British poetry—the vividness and passion rising in union from line to line, until at the last it

reaches a perfect transport, in which the poet involves the reader as well as himself.

"I see thee dancing o'er the green,  
Thy waist as jump, thy limbs as clean,\*  
Thy tempting lips and roguish eyes—  
By heaven and earth, I love thee!"

Mrs Burns is likewise celebrated in the song, "This is no my ain lassie," in which the poet describes himself as meeting a face of the fairest kind, probably that of some of the elegant ladies whom he met in genteel society, but yet declaring that it wants "the witching grace" and "kind love" which he found in his "own lassie": a very delightful song, for it takes a fine moral feeling along with it. Of "Their Groves o' Sweet Myrtles," we are not so sure that Mrs Burns was the heroine, though, if the wives of poetical husbands always had their due, she ought to have been so. Jean survived in decent widowhood for as long a time as that which formed the whole life of the poet, dying so lately as March 1834. She was a modest and respectable woman, and to the last a good singer, and, if we are not greatly mistaken, also a tolerable dancer. She had been indulgent to her gifted though frail partner in his life, and she cherished his memory when he was no more.

Here for the present we must stop: the Ayrshire poet somehow contrived to admire so many ladies, that there is no rumpling them all into the compass of a single paper. We shall speedily resume the subject.

#### POPULAR INFORMATION ON SCIENCE.

##### ANIMALS PRESERVED IN TIMBER AND STONE.

MANY instances of the discovery of torpid, but still living animals, inclosed in timber and stone, where they must have been secluded from air and nourishment for long spaces of time, are on record; but the phenomenon has never, as far as we are aware, engaged the attention of men of science, probably from a dread which these men seem to have of the vulgarly wonderful. The phenomenon has certainly been, as it could not fail to be, the subject of vulgar wonder; but yet it is one which is also calculated to throw some valuable light on matters of science, as we hope to show before concluding the present paper. We shall, in the first place, enumerate a variety of cases.

Mr Snellie mentions, in his *Philosophy of Natural History*, that, in the *Memoirs of the Academy of Sciences* for the year 1719, we have an account of a toad found alive, and healthy, in the heart of an old elm. He also mentions that in the year 1731, another was discovered in the heart of an old oak, without any visible entrance to its habitation: "from the size of the tree," he adds, "it was concluded that the animal must have been confined in that situation at least eighty or a hundred years." Monsieur le Cat, a member of the Royal Academy of Sciences at Rheon, in 1756, published a paper on this subject, in which he mentioned several remarkable instances of the phenomenon—as the finding of two worms in the centre of a block of marble by the statuary of the king of Spain, a crayfish in the midst of a piece of marble near Tivoli, and a number of frogs at Guadeloupe in the rock through which the king's physician there was digging for water. At Cassel, about this period, in a stone quarry, three toads were discovered lying together in a cavity of the rock: they were at first quite lively, but died in half an hour.

Of the discovery of single toads in large blocks of stone, the instances are so numerous, and so much alike in their details, that it would be tedious to state them all, or any considerable number of them. In most of the instances that have fallen under our attention, the animal is described as lying in a hole of about its own size, the sides of which were discoloured. In all cases, the animal appeared torpid at first, but speedily became reanimated, and lived for a little while, usually about an hour, but sometimes for a much longer space. Sandstone appears to be the species of rock in which such animals are most frequently found, and usually the original situs of the animal is stated to have been at a considerable depth under ground. The *Gentleman's Magazine* for April 1773 mentions a large live toad having been found in a lump of coal at the Lathom coal-works in Lancashire, a hundred and eighty feet under ground.

In Chillingham Castle, the splendid old seat of the Lords Tankerville in Northumberland, there was once a chimney-piece of sandstone, from which a live toad was said to have been taken. The circumstances, as far as known, were thus described by a topographical writer about sixty years ago:—"In that part of the chimney-piece of the hall, which lay transversely from side to side, there was a hole of an irregular figure, plainly corresponding with the parts of an animal. Its greatest length was about seven inches, and its greatest depth, which was in an oblique direction, about five. The inside was encrusted with a dark brown substance, of a close texture, that was perfectly smooth and even, as if it had been polished. In another chimney-piece, at Harton Castle, there was a like hollow, nearly of the same dimensions, which ap-

peared to be the other half of the mould; but both are now destroyed. That part of the stone which was at Harton, has been broken and defaced, I know not how; and the late Earl of Tankerville having a few years ago caused a window to be made where the fireplace was, this part of the chimney-piece was broken by the workmen, and built into the wall. There is, however, still remaining a large frame that used to hang over the mantel-piece, in which is the resemblance of a coat of arms, a large toad in the field, the crest a toad-stool, with a less toad upon it; the mantling is of snakes interwoven; the carving on the frame itself is serpents and effets, and the following inscription is written in large letters of gold, in two ovals, one on the left side of the arms, and the other on the right." [The inscription we omit, as it is in very quaint Latin, but what follows is a translation of the first part of it:]—

Hither, Stagyrite,

If you would see a phenomenon more wonderful than Euripus,\*

Let seas ebb and flow as they may, and let him be a Lunatic

Who deposits the moon of her (tidal) honours.

Behold here a novelty, such as neither Africa presents to thee

Nor the Nile with her fabulous sands—

A fire and pure flame,

Existing though shut out from vital air.

From the dark recesses of the cut rock which you see,

The hands of the obstetrical stone-cutter gave light

To a living toad.

Notwithstanding the numerous cases of the discovery of stone-inclosed toads, which have been from time to time laid before the public, many naturalists in modern times have professed not to be convinced that such a thing is possible in nature. Sir Joseph Banks was of this number: he said, that in his whole life he never, with all pains, could trace such a tradition or account to any credible authority, so that it could be recorded as a fact. In consideration of this incredulity, and to set the bare question of possibility at rest, the Rev. Mr Comber, rector of Oswaldkirk, near Brough, in Westmoreland, was at the pains to obtain a regular affidavit before a magistrate, respecting the finding of a frog in a huge block of millstone grit on Stainmoor, by four men engaged in repairing a highway. This event took place on the 25th July 1832. The four men, in their declaration, say that they "were astonished, on splitting a large block of more than a ton weight, by a lively yellow frog springing out of a cavity in the centre of the said solid rock, where it had been as closely embedded as a watch in its outer case, without any communication with the surface nearer than eight inches. The said frog was taken up by one of us, when it discharged a considerable quantity of black fluid; it was safely conveyed to Brough, and given to Mr Rumney, junior, surgeon, in whose possession it now (January 21, 1833) continues, in a healthy lively state." The whole document is printed at length in the *Gentleman's Magazine* for August 1834; so that, we presume, the fact of the existence of live animals of certain kinds in situations where they must have been shut up from air and light for ages, can no longer be reasonably disputed.

Out of a number of cases of toads found in timber, which have come under our attention, we shall quote one which was stated a few years ago in an American journal: we are unfortunately unable to give the date, or the name of the work:—"A short time since, we published an account of the discovery of a snake, inclosed in a solid mass of hard coal, at the depth of 150 feet from the surface of the ground, in a coal-pit in England. The following article, communicated from Middleton, Connecticut, contains a parallel case of a different animal, inclosed in a different but not less extraordinary prison in this country:—"At Mr Stephen Miller's mill, in that place, was sawed an uncommonly large pine log, from which six boards were taken out of each side. The log contained 220 rings or grains, one of which is annually formed by the growth of the tree. In the middle of the log was found a hollow place about two feet long, and about the size of a man's hat crown. When the tree was felled, the hole must probably have been nine or ten feet from the earth. From this hollow place, when opened at one end by the saw, hopped out a pretty large toad, rather blacker than usual, and displaying as much activity as is common to its family. After a few hops it jumped down the sawpit, plunged into the mill-pond, and disappeared. As there was no hole in the sides, or in any part of the log, except directly in the centre, it is supposed by some that when the tree was young, the toad, then probably extremely small, had crept into some little defective aperture, since closed up by the growth of the tree, and had remained there ever since, gradually more and more inclosed, as the pine increased in size. As the tree grew, the hole must have grown in proportion; so that, in process of time, the toad must of course have been greatly relieved from his cramped position, and finally accommodated with a snug drawing-room, to which nothing was wanting but the company of his friends.

If, according to the Pythagorean doctrine of transmigration, this reclude had once been a MAN, and if

\* Euripus was the name given to a portion of the *Ægean Sea*, near the island of Eubœa, which was said to present the remarkable phenomenon of a tidal ebb and flow seven times in the twenty-four hours. Judging from this inscription, Euripus seems to have been one of Aristotle's great marvels. On this the inscription is founded. The sands of the Nile are called "fabulous," because it was said they gave birth to giants. Shakespeare, who seems to have known all things, says, "Your serpent of Egypt is bred now out of your mud by the operation of your sun; so is your crocodile."

\* This phrase is apt to displease an English ear: but the displeasure vanishes when its Scotch meaning is understood—namely, the *reverses of change*.



the wand of an enchanter could have restored him to his human form and voice, it would have been pleasant to learn from him some particulars of our country at the distance of two centuries past, and to listen to garrulous old age recounting the history of days of yore. He was, probably, when released from prison, the oldest living creature in the United States. Admitting the HUMANITY of the toad, conjectures might vary, whether, in his pristine form, he might have been an Indian Sachem of the Pequod or Mohegan tribes, or one of the old settlers of Plymouth, New York, or Virginia. A calculation of probabilities, founded upon the supposed period of his incarceration in the tree, would naturally incline minute chronologists to the adoption of the former conjecture in preference to the latter.\*

It becomes of importance to ascertain what are the animals which are occasionally found in these situations. Toads are certainly the species most frequently found; and the reader has seen recorded an instance in which the prisoner was a frog. In August 1821, at Auchtertool, in the county of Fife, as David Virtue, a stone mason, was dressing a block of sandstone, with a view to its serving as a millstone, he found, embedded in it, a *living lizard*. The account of the circumstances in Tilloch's Philosophical Magazine states that the creature "was about an inch and a quarter long, of a brownish-yellow colour, and had a round head, with bright sparkling projecting eyes. It was apparently dead, but after being about five minutes exposed to the air, it showed signs of life. One of the workmen very cruelly put snuff in its eyes, which seemed to cause it much pain. It soon after ran about with much celerity, and after half an hour was brushed off the stone and killed. When found, it was coiled up in a round cavity of its own form, being an exact impression of the animal. This stone is naturally a little damp; and about half an inch all round the lizard was a soft sand, the same colour as the animal. There were about fourteen feet of earth above the rock, and the block in which the lizard was found was seven or eight feet deep in the rock; so that the whole depth of the animal from the surface was 21 or 22 feet. The stone had no fissure, was quite hard, and one of the best to be got from the quarry of Cullaloe, reckoned perhaps the best in Scotland." In May 1837, at Buchhaven, in the same county, as some workmen were quarrying stones on the beach for the erection of a harbour, they discovered a cavity fully eight inches deep, in which was a fish about six inches long, resembling the kind called in that place a *sea-cat*. When taken out of the stone, it appeared stiff and dead, but in a short time it began to show symptoms of animation, and it lived for a few hours. Round the inside of the cavity, there was a fine coat of clay, about a quarter of an inch thick.\* In November 1820, as a woodman in the employment of Mr Pringle of Clifton was engaged in splitting timber for railings in the woods close by the lake of the Haining, near Selkirk, "he discovered in the centre of a large cherry-tree a *living bat* of a bright scarlet colour, which he foolishly suffered to escape, from fear; being fully persuaded (with the characteristic superstition of the inhabitants of that part of the country) that it was 'a being not of this world.' The tree presents a small cavity in the centre, where the bat was inclosed, but is perfectly sound and solid on each side."—*Caledonian Mercury of the day*. Though we consider it worth while to include this case amongst others, we cannot allow it to pass without the remark, that the nature of the animal in question could scarcely, in the circumstances, have been very correctly judged of by the woodman.

In December 1827, as some workmen in the employment of Mr Atkinson, cabinet-maker, Liverpool, were sawing up a log of zebra-wood, fourteen feet long, and four feet and a half square, they found near the centre, an insect, about two inches long, and rather more than an inch in circumference, resting in an oblong cavity, a little wider than the bulk of its own body. It had apparently eaten its way a few inches through the wood. A naturalist, to whom the creature was shown, pronounced it to be the larva of some species of *Prionus*, and said that, in proper circumstances, it would go through the two ensuing stages of its existence, and be in the second a splendid winged insect. Such larvae are sought for in recesses within trees in America, and eaten by the natives as a delicacy. The creature continued to exist for some time in a box, manifesting great activity in the use of its mandibles.

It would thus appear, as far as authentic accounts are to be obtained, that the animals found inclosed in rock or timber are all of them inferior to the mammal class; that the kinds most frequently found are of the fish and reptile classes; and that, in some instances, insects and crustacea are found so inclosed.

In two points, philosophy seems called upon, in an especial manner, for explanation—how were the animals so placed, and how have they been kept in existence during such a long course of years? With regard to the first question, we conceive it to be sufficiently answered, with respect to stone inclosures, by the well-known facts developed with regard to the formation of rocks. The kinds of stone forming the inclosures are invariably sedimentary, that is, formed as a residuum of heavy matter at the bottom of collections of

water. When the bed of rock forming the Cullaloe quarry was a soft mass of sand, there could be no difficulty in the deposition of a toad or lizard within its ample bosom. Many animals are found in a fossil or petrified state in that class of rocks, and the only difference between the two cases is, that in the one life has been preserved, while, in the other, it has been extinguished, and the mass of the animal's body transformed into the same matter as the surrounding rock. It would thus appear that the inclosed animal, in which life has been retained, must have possessed, by virtue of that life, a power of resisting the influences which petrified its dead companions—a power in some measure analogous to that possessed by the living fibre of the stomach to resist the action of acids which immediately dissolve dead animal matter, and even corrode the hardest metals.

With regard to animals inclosed within trees, it must be obvious that they had sought a temporary home or shelter in what was a chink in the timber when they entered; that they must have there fallen into a state of torpor; and that, during their sleep, the chink had been closed up, so that the influences which usually awake torpid animals to new life never visited them, and they were allowed to slumber on for ages.

This brings us to the phenomenon of the very long protracted life of the stone-inclosed animals. First, as to the length of life experienced by these creatures. We here derive some light from the researches of modern geology. The rocks in which such creatures are found are usually of the less ancient formations. The millstone grit, in which a frog was found upon Stainmoor in 1832, is one of the newest rocks; and sandstone, in which so many others have been found, may be called middle-aged. Still, with respect to ordinary chronology, these rocks are of vast antiquity. It is not by any means extravagant to suppose that the toad found at Lathom coal-works—which leapt out from its recess at an old woman's fireside, and for some days ate, breathed, and performed all its natural functions, as well as its obscure brethren generated a few months before in the neighbouring ditches—was many thousands of years old. How, it must be asked, has life been protracted for so great a length of time, without any of its usual supporting means? The mind here naturally adverts to the familiar wonder of *hibernation*, or that state of dormancy in which some animals pass the winter; but we find that it is the opinion of M. Geoffroy St Hilaire, a first-rate authority on such matters, that the state of the stone-inclosed animals is different from this, and we rather think that the appearances justify his conclusion, the condition of an animal during hibernation being by no means one of complete torpor. According to this eminent naturalist, "we must conclude that there exists, for organisation under such combinations, a state of neutrality intermediate between that of life and death—a state into which certain animals are plunged in consequence of the stoppage of respiration, when it takes place under certain circumstances. This," he adds, "is observed in a certain degree in the crustaceous animals; vital action is probably suspended in them in such a manner that the excitation of certain agents is required to awaken them and put them in motion." It is perhaps no very bold venture to suggest that the condition under which this torpor commenced was—at least in certain of the creatures concerned—that of freezing. When the attendants of Captain Franklin fished in the Coppermine River, the fish froze as they were taken out of the nets. In a short time they became a solid mass of ice, and by a blow or two with a hatchet were easily split open. If, in this completely frozen state, they were thawed before a fire, they recovered their animation. Now, suppose that the fish found in the rock at Buchhaven had, when frozen by some chance, been inclosed in a mass of sand, and that, while it continued in that state, the sand became hardened, so as to close it up completely from all influences which could alter its condition, it seems no more surprising that it should have retained life for hundreds of thousands of years, than that it should have done so for a month or a week. As it is well known that frogs, found frozen in ice, also recover their animation when thawed, the protracted existence of that class of animals is in like manner accounted for. Nor, when we recollect Dr Franklin's anecdote of the flies which he took from a bottle of Madeira and revived in the sun, do we find any difficulty in supposing that creatures of that grade in creation may have preserved life for ages, in cavities within stone and timber, not perhaps by virtue of being frozen, but by being thrown by other means into a state of torpidity equivalent to that condition. It is to be kept particularly in mind, with regard to this torpid state, that it supposes a complete cessation of all the animal functions. No waste can take place in such circumstances; consequently, there can be no need for food. The lungs or gills are arrested in their play; consequently, there can be no need for air. At the same time, the fibre and juices of the animal's entire system are thoroughly preserved, so that no corruption or deterioration of any kind can befall them. Hence, when the state of torpor ceases, the life and all its proper functions recommence, whether at the distance of a few months or of unnumbered centuries.

Should these views be correct, a curious geological question will arise. The plants found in the sedimentary rocks, under what are now temperate and even frigid latitudes, are of the kinds which now grow in warm countries only. Hence it has been presumed

that a high temperature once prevailed at those parts of the earth. Whether this high temperature was occasioned by propinquity to the sun's course, as in the tropical countries of the present day, or by some local circumstances, such as the existence of deep sun-exposed recesses in the earth's surface, or by other and unknown causes, are points as yet unsettled amongst geologists. Now, here comes in a new fact, seemingly proving that low degrees of temperature, sufficient to freeze animals into torpidity, had also prevailed occasionally in those climes. How far existing theories would require to be modified in order to admit this new fact, we shall leave to more profound speculators in this interesting science than we can pretend to be.

## THE CONTINENTAL BLOCKADE.

A STORY.

THE Continental Blockade was one of the gigantic ideas of Napoleon. Master of the whole of Europe, either directly or indirectly, he still found all his schemes thwarted by the indomitable opposition of England, and, to weaken this enemy, whose whole strength and wealth lay avowedly in her commerce, he exerted all his power to close the ports of the continent against her shipping. To a certain extent, he was successful. Almost the whole line of the shores of Europe was blockaded against the British shipping; but the natural consequence was, that a contraband system was established, which undid the effect of the whole blockade. Even France itself, which might be supposed to follow up the emperor's wishes with the greatest strictness, had been too long accustomed to depend on Britain for commercial supplies, to be able to do entirely without them. In spite of the closest watching on the part of Napoleon's officials, large quantities of smuggled goods were introduced from Britain into the Channel coasts of France. It was at one of the French ports in this quarter, that the following incidents took place, which will be more intelligible after this explanation of the state of matters at the time of their occurrence.

The port in question, like others in France, had suffered severely from the blockade, in as much as its shipping lay idle and useless, through fear of the terrible enemy which held the mastery of the seas. The inhabitants of the port consequently endured very considerable privations, and a portion of them were not unwilling to profit by the visits of smugglers from the other side of the Channel. Others, again, and among these all the old sailors who had fought against Britain, would have died sooner than have smoked a bit of tobacco, or drunk a glass of rum, that had been brought into the port in violation of the blockade. One day, an old privateer captain, named Scipio, was seated with a number of old mariners like himself, on the deck of the *Halcyon*, a dismantled hulk which Scipio had taken in other days from the English, and which now stood in a corner of the harbour, converted into a stationary residence for the privateer and his associates. "Is it not shocking," said Scipio to his companions, "that the port should have abundance of tobacco, sugar, coffee, and other articles, when it is certain that for many weeks not a merchantman has cast anchor in the harbour?" "Shocking," repeated every one around. "My friends," said Scipio, "we are daily and nightly betrayed. The blockade is not respected. Though we have custom-house officers and coast-guards, they are worth nothing. There is some connivance between the townspeople and the English, which enables the smuggler—for it is one vessel, I am convinced, that does the whole mischief—to approach the coast, always at the very moment when the coast-guard are out of the way. These wretches of grocers would sell their country for profit." "If you are right, Master Scipio," said one of the seamen, "the smuggler should not be far off now, since the guard-sloop is gone for a day or two." Scipio turned his head slowly to the west as he heard this remark, and gazed on the long line of blue waters before him. In an instant he cried, "My glass! my glass! that villainous smuggler is there again!" The old privateer's telescope was handed to him, and, after arranging it, he sank gradually on one knee, and swept the horizon with his experienced eye. From sea he turned his gaze to land, and examined that portion of the prospect with equal attention. "What, in the name of wonder, brings that girl in the blue robe so often to that rock by the sea side! And at such a distance from the town too! She must have a purpose!"

The old mariners around could not comprehend the meaning of Scipio's remark. "The smuggler," said one, "what of the smuggler?" Scipio rose smartly to his feet, as if roused from a reverie. "The English smuggler is about to land somewhere not far off this night, my friends; and shall we allow it! No! though the guard-sloop be away, we shall find some boat or another to carry us to sea, and I am sure we are men enough, old as we are, to stop for once the smuggler's pranks. I shall go this instant, and demand letters of marque from the commissary of marine. There is treachery somewhere, my friends, but we shall make the blockade be respected!" The ancient mariners cheered old Scipio with spirit, as he departed on his errand to the house of the commissary. "We shall make the blockade be respected," cried they.

Scipio was not long in reaching the house of the commissary, from whom he had to receive the letters of marque, or commission, necessary to enable him to

\* The particulars of this case are obtained from the Fife Herald and Edinburgh Courier newspapers.

fulfil the purpose he had in view. But when he arrived at his destination, he found that the commissary was just about to sit down to dinner. A servant, however, showed him into an elegant hall, and promised to announce his wish to see the commissary. Scipio sat here for nearly half an hour, biting his nails at the thought that the night was advancing, and the smuggler would soon have his business done. The impatient old privateer at length seized the bell-rope, and rang it violently. A servant reappeared, and, after an apology, on account of there being company at dinner, informed Scipio that the commissary would be glad to hear his business to-morrow. "To-morrow!" cried the veteran; "tell your master that I want a letter of marque, that the English smuggler is in sight, and that in an hour or two, if not prevented, his cargo will be landed, and the blockade broken!" The domestic disappeared, and soon returned with a message to Scipio to wait till after dinner. Scipio sat down, thinking the meal might be soon over. But first course, second course, and dessert, successively passed by under the eyes and nostrils of the privateer, and more than an hour was taken up with them. Scipio was now enraged beyond bounds, and he burst through the crowd of servants into the dining-room, where the commissary of marine sat at the head of a splendid party. "Master commissary!" cried the angry and unceremonious seaman, "why have I been kept waiting for nearly two hours in your hall, when I only want a slip of paper, and when you have been told that a smuggler is on the coast, and is violating the blockade?" The guests sat astonished at this speech. "I don't require to be taught my duty," cried the commissary; "leave the house, fellow." "I will go," returned Scipio, in tones as high; "but I will say to the whole town that you have refused me a scrap of writing which would have given me the right to battle these foes of my country! There are traitors here! There are some who know but too well the place and the hour for the smuggler's descent—" Suddenly the irritated veteran came to a pause. His eye had fallen on the young daughter of the commissary, and he remained gazing upon her in a species of stupor. This pause in the angry discussion gave an opportunity to a young lieutenant in the naval service, who was present, to rise and approach the privateer. Scipio permitted the youth to lead him out of the room and the house without a word of resistance. "Scipio, my old friend," said the lieutenant, when the two were alone, "what is the cause of this conduct?" "Oh, Master Augustus, it was I who made a man, a seaman of you; and if you have any kindness for me on that score, get me a letter of marque, and a boat of any kind, and let me go and punish that rascally smuggler!" "Your demand may be reasonable, or may not, Scipio," said the young officer, "but you took a strange way to prefer it to the commissary, and on the night, too, of his only child's betrothing." "What! that girl whom I saw just now!" asked the old mariner. "Even so," was the reply; "that very young lady at whom you stared so strangely." "And to whom may she be betrothed?" said Scipio. "To me, my old friend," returned the lieutenant.

Scipio gave a long "whew!" and then was silent for a minute or two. "Master Augustus," said the veteran at length, "you will have a wife who is strangely fond of the sea-shore." "I do not comprehend you, Scipio," said the youth. "Ah, Master Augustus," replied the old privateer, gravely, "beware how you marry that girl. Well might I look in amazement at her. She is an enemy to her country, or has some base connection with its enemies. For several months past I have seen her clamber along the rocks, day after day, at some distance from the port; and I am certain that it is she who gives signals to the English smuggler, and lets him know when it is safe to land his cargo." "Scipio, you are mad!" exclaimed the officer; "the daughter of the commissary of marine, my Cecile, give signals to a smuggler! This is pure raving!" "It is no raving, Master Augustus," returned the veteran; "I cannot be mistaken. The dress, the figure, every thing tells me that she is the same person on whom my glass has been fixed a thousand times. Ah, beware, Master Augustus!" The young officer was confounded by the old seaman's pertinacity in making this assertion. "Come to-morrow evening to the Halcyon," said Scipio, "and you will probably be convinced by the evidence of your own eye-sight." The bewildered lieutenant gave his consent to this arrangement, ere the two parted for the evening. Scipio was so strongly attached to the youth, that this discovery, so deeply affecting his happiness, drove the letters of marque almost out of the old man's mind. Too much time, besides, had been spent to render them now available. But the privateer was right. On the following day, it was well known in the town that the English smuggler had discharged a cargo not far from the port.

For several successive evenings after the one described, Scipio and the young officer of marines watched the rocks along the coast from the deck of the Halcyon, and on each occasion were disappointed. No Cecile, nor any body resembling her, appeared to confirm the veteran's statement, and Augustus by degrees became convinced that Scipio's conjecture was utterly unfounded. The daily sight of Cecile was enough of itself to overthrow all jealous suspicion. As the enamoured officer gazed on her slight but exquisite form, and her lovely countenance, as yet almost childlike in its beauty, or listened to her sweet voice as it accompanied the motion of her delicate fingers on the harp, he thought he must have been mad to imagine for one moment that a creature so young, so tenderly nurtured, should take

up the task which Scipio had assigned to her, even if it could be supposed that her father should be so false to his official trust as to countenance the contraband trade. And then, as to the chances of her loving another, how could the lieutenant believe this to be the case when her truth-speaking lips so openly avowed her affection for himself! No, no; Scipio had seen some fisherman's daughter on the rocks, if he had seen any body at all. Such was the train of thought that passed through the mind of Augustus as he sat by the side of Cecile on the fourth or fifth day after their betrothal. "But a few days now, Cecile," murmured the lover, "and you will be mine—mine for ever." "Would that the time were come, Augustus," said the daughter of the commissary. "Fool that I was to doubt her love!" thought the officer. "Ah, Cecile!" said he aloud, "you make me too happy." At this moment the pair were interrupted. The commissary himself entered the room, a cold, stern, reserved person, most unlike his daughter, in seeming temperament. "Augustus!" said the commissary, "there are bad news of our cruisers. You will have to depart to-morrow for the eastern part of the Channel." Cecile grew pale, and cast her eyes on the ground; and when she raised them to reply to the adieu of her lover, they were filled with tears.

On the morrow, Augustus set off to join the frigate to which he was attached. On the evening of the same day, Scipio sat at his post on board the Halcyon, with his glass in his hand. His gaze was turned long, long to sea, and at length he directed it to the land. He had no sooner done so, than a sort of yell escaped him. "Is not this horrible, abominable!—the very day of his departure!" cried the old seaman; "there she is again on the rocks; her blue dress, her figure, nay, her face, her mouth, her eyes—I see them all as plainly as if she were two paces off! It must be she! Treacherous, wretched girl! Oh, my poor Master Augustus!" As Scipio uttered these exclamations, he turned his glass again to sea. "By heavens, there goes the smuggler already! Already does he know the time to be favourable, and again the blockade will be broken, while I lie here idle, and can do nothing." Convinced of the connection of the commissary with the smuggler, Scipio did not again go on the needless errand of seeking letters of marque, but formed many bitter resolutions of exposing him. At the same time, Scipio prayed most earnestly for the speedy return of Augustus. The old man was gratified in his wish. Scarcely had night closed in, when the frigate to which Augustus belonged entered the harbour with a rich prize—two English East-Indians. The young officer landed immediately, and went to visit Cecile. The daughter of the commissary listened with an obvious mixture of fear and delight to her lover's narrative of the capture of the two vessels. She separated his long light tresses to see if he spoke true—if the bullets which had passed over his head had not wounded him. She pressed his hands in hers; she was so happy! But Augustus was abruptly called away from this interview. It was Scipio who sought him. What was the result of their interview, will be immediately seen. Suffice it to say, that the frigate had not been many hours in the harbour ere she again stood to sea.

On the ensuing morning, the people of the town beheld a stirring sight. At a short distance along the coast, the frigate was seen hemming the well-known smuggler close in to the land. After an attempt to escape on several tacks, the smuggler ran almost upon the rocks. The frigate could not follow it without danger, but a boat full of armed men soon left the frigate to board the contraband vessel. There was yet one chance of escape for the smuggler. To seaward was the frigate, and on one side was the fort of the town, shutting out all chance on these quarters; but on the other side was a narrow passage between a large sunken rock and the shore, which might yet permit an escape, for through that passage the frigate could not have attempted to follow. But the question was, whether or not the smuggler knew of this passage! Apparently it did not; for it seemed to await the approach of the boarding-party, at the head of whom was Augustus, with his trumpet in his hand. Scipio, too, was in that boat, for the veteran had pressed to be taken on the service. The boat was nearing the smuggler, and it was the hope of all that the contrabandists were ignorant of the passage, when suddenly a girl, dressed in blue, appeared on the rocks, and gave a signal to the smuggler to throw itself into the pass! The signal was noticed by those in the boat, and indeed by all. The trumpet fell from the hand of Augustus as he beheld that girl's figure. But some of the men, in the irritation of the moment, raised their guns to their shoulders. "Fire!" cried Scipio. "No, no! it is in sport," cried Augustus. But his words came too late. One of the men fired, and the upraised hand of the girl fell to her side. In a moment after, her body was seen to fall prostrate behind the rock where she had appeared. The signal was not in time to save the smuggler, if indeed it was fully understood. There is no necessity for detailing the particulars of the capture which followed. It is enough to say that the smuggler was taken, brought into the harbour, and its whole cargo publicly burnt on the streets of the town, amid the acclamations of the multitude. The commissary of marine officiated as the regulator of the burning, and threw the first article into the fire with his own hands. The commissary was somewhat pale at the moment, but by his side stood a young officer, whose colour was that of a corpse.

Some weeks after this affair, a letter reached Augus-

tus. It was written from a convent. Part of it ran thus:—"Ere I knew what purposes I was furthering in so doing, I was ordered often, often, by my cruel father, whose strongest passion was avarice, to appear on these unhappy rocks; and when I did become aware of all that lay under the proceeding, I sought to free myself from the task, but could not. Suspicion was more unlikely to fall on me than others. My stern parent's influence over me was beyond my power to escape from; and at the very last, on the day of the smuggler's capture, he compelled me to make an attempt to save the vessel. I longed for our union, Augustus, because I loved you; but I also longed for it to rid me of this most unnatural servitude. \* \* \* I know you will pardon me, beloved, and the thought will sustain me under our endless separation. Earlier would I have written, but for my wounded hand; it is now almost well. Adieu."

Some years after this period, Augustus de Bussy was a married man. His wife was a beautiful woman, but it used to be remarked by all her friends as a very odd circumstance, that she always wore a glove on one of her hands. The reader, however, will not wonder much at this circumstance, for he will conjecture, and rightly, that Cecile was the person in question. As long as the commissary lived, Augustus, though he kept the strange old man's secret, never could bring his mind to think of connecting himself with such a being; but when the commissary died, which took place within two years of the affairs related, the young officer took Cecile from the convent where she had found a refuge (although she had not become a member of its sisterhood), and made her the mistress of his home. Old Scipio, notwithstanding the thoughts he had once entertained of her, was happy in being allowed to teach the mysteries of ship-building and ship-mailing to the little ones who had her blood in their veins.

Thus closes our episode of the Continental Blockade.

#### OCCASIONAL NOTES.

##### A NEW WORD.

The Americans never scruple to coin a new word or revive an old one, when they find occasion to do so. The last of their revivals is the word "colcluded"—the preterite of the verb "to collude," which may thus be inflected, collude, colluding, colluded. To collude, signifies to enter into a collusion. When we, therefore, would use the phrase, "they entered into a collusion," the Americans would say, "they colcluded," which saves circumlocution, and is justified by its use amongst old writers.

##### PLAN FOR DIMINISHING LITIGATIONS.

Some time ago, in looking over a file of English newspapers, we chanced to see a paragraph which contained a good idea, worthy of being acted upon. This was the projection of a plan for preventing the more common kind of litigations; in other words, a scheme for settling disputes in a cheap, peaceful, and expeditious manner. The broaching of such an idea has no doubt been suggested by the well-known delays and heavy expenses incurred in ordinary litigations. According to the practice now in use, lawyers have to be employed, and the case is appealed from court to court, all manner of shifts and delays are resorted to, and when actually terminated, the cost of the suit is perhaps more than the suit is worth. With the hope of avoiding some of these evils, contending parties frequently submit their case to an arbitrator, binding themselves to abide by his decision. This, however, is seldom satisfactory. Arbitrators often take years to settle a case, even of a simple nature, which has thus been brought before them, and it is impossible either to hasten them in their decision, or to prevent them from loading the suit with expenses for witnesses, reports of persons whom they consult, and fifty other things, that strike them as necessary for the settlement of the dispute. From one or all of these causes, a written obligation to submit to an arbitrator, or to an oversman upon two arbitrators mutually chosen, is sometimes most vexatious in its results. In one case which comes to our recollection, the costs of a suit to recover some L.50 or L.60 were run up by a law arbitrator to L.1700.

Arbitration, as commonly practised, being thus far from simple or satisfactory, a new method is suggested. In every town, let a number of intelligent and well-meaning persons form themselves into an association, to be called an "Arbitration Society." The society to appoint certain of its members, in whom they have confidence, to act as arbitrators or judges on all cases brought before them. All the members to agree to bring, if possible, the cases in which they are concerned for settlement before these arbitrators, and to exert themselves to persuade others to do the same. Every case brought before the arbitrators to be conducted without the intervention of lawyers, or written pleadings; the whole process to be managed by personal appearance of parties, and to be settled at not more than two or three hearings, or in the period of one week; if not settled in that time, the obligation to arbitrate to be null and void.

Such is a slight sketch of the proposed plan for diminishing the number of litigations. It, of course, can never apply to the more intricate order of cases in which legal points are involved, but only to the ordinary class of actions in equity, such as disputed accounts, in which both parties agree to submit to the decision of men who can derive no profit from the protracted consideration of their claims. In these respects, the



scheme seems more calculated to abolish the practice of referring to law arbitrators, than that of resorting to the ordinary tribunals of the country; but if it even in some measure accomplish this end, it will not fail to be of considerable use. We wait with some anxiety to hear how it has succeeded in the town in which we are told it is now in the course of trial. Whether it succeed or not, we think the attempt to establish such an extra-judicial tribunal in England, is a curious evidence of the growing distaste for litigation, and, all things considered, can excite no degree of surprise.

#### A FEW WEEKS ON THE CONTINENT.

BRUNNENS OF NASSAU CONCLUDED—RETURN TO THE LOW COUNTRY.

At an early hour of the morning, as I have said, we rose to explore the village of Langen-Schwalbach, and the localities of its far-famed brunnens. The whole are situated in three valleys radiating from a centre, and environed with the usual round-topped hills of Nassau. The village occupies one of the valleys, and has all the appearance of considerable antiquity, having been originally built contiguous to a mineral spring, which is now to be seen on one side of its long straggling street.

The valley which enjoys the largest share of celebrity for its water, is that radiating in an easterly direction, and down the side of which we enter from Wiesbaden. Here are the two principal springs—the Pauline and Weinbrunnen. The Pauline, which is of latest discovery, is farthest up the valley, and occupies really a charming spot for the morning perambulations of water-drinkers. Both this and the other springs rise in circular orifices, as from a well, and the water is dipped in glasses by female attendants, which is a much more satisfactory plan than that of pumping the water from a source unseen by the drinker. We have thus no fear that the water is a compound artificially manufactured in the cellar of the pump-room, but are assured of its rising from the great laboratory of nature below. On descending into the small enclosure in the centre of which the Pauline rises, we perceive that the water is projected upwards with considerable force. On being lifted in a glass, small air-bells are observed rising to the surface, as if the liquid possessed a certain degree of effervescence. I shall never forget the first taste which I had of this very remarkable mineral spring. It most resembled sharp small-beer, but was accompanied with a ferruginous property, which made the tongue feel as if it had been scoured with alum. I cannot, however, say that there was any thing disagreeable in either the smell or flavour of the water. As a drink, it was infinitely more palatable than any mineral water I had ever before tasted, and I should think that to habitual beer-bibbers it must form quite an agreeable tap.

The Weinbrunnen (or wine-spring), at the foot of the vale near the hotels, bath-house, bazaar, and other structures, and also the Stahlbrunnen (or steel-spring), situated in the western valley, did not seem to my taste greatly different from each other; in fact, all the three springs have a similar sharp small-beer flavour, though they may differ in strength. With respect to the precise nature of the waters, Dr Granville observes, that "the quantity of carbonic acid gas is greater in the Pauline than in either the Wein or the Stahlbrunnen. The relative proportion in a pint of the latter is twenty-three cubic inches, that of the Pauline being twenty-nine. There is steel or carbonate of lime in all the springs. The Pauline contains the least of it." All are serviceable in cases requiring chalybeates; but I apprehend that here, as at other watering-places, much of the cure in valetudinarians is ascribable to early rising, and almost constant open-air exercise. The walks along the hill-sides, and towards the inner winding extremity of the valley of the Pauline, are exceedingly delightful, every thing being done that taste can suggest to provide for the comfort of the visitors. So highly are the waters appreciated for their medical quality, that 500,000 quart bottles are filled and exported annually.

The old spring in the village is sulphureous, with little iron in its composition, and is now deserted for its more modern competitors. When we paid it a visit, it had no attendant to sell its waters, and we only knew its taste by lifting a little in our hand. The author of the "Bubbles from the Brunnens of Nassau" observes of this ancient spring, "Such a suffocating gas arises from it, that, as at the Grotto del Cane at Naples, one single inhalation would be nearly sufficient to deprive a person of his senses. Besides being strongly impregnated with this gas, it has such an unearthly taste, that one almost fancies it must flow direct from the cellar of his Satanic majesty." This is doubtless a quizzically overdrawn statement. Excepting the usual sulphureous taste of such springs, there was nothing offensive in the water; and as for the suffocating smell, we were not sensible of any thing of that kind worthy of notice.

Langen-Schwalbach is visited almost exclusively by Germans. Few English remain to take the benefit of the waters, the place being too quiet and retired for those classes of our countrymen who go abroad on the plea of unsound health. Among all the English whom one meets with in travelling in this part of the world, there is a restless desire to go farther: they push on from place to place, staying a short time here and a short time there, as if in quest of something better, and will not be contented with simply

abiding in such a place of cool retirement as Langen-Schwalbach. Influenced by this propensity to push on, they in the same manner hurry through the finest portion of the Rhine scenery, still looking for scenes that are more beautiful, and in many instances return either in a dissatisfied humour, or with a mere dreamy recollection of having been whirled over a certain extent of ground, containing some hills, old castles, a river, and a few strangely built towns and villages. We found that there had been at Langen-Schwalbach, during the season, four thousand visitors, a number very much greater than that specified by Sir Francis Head; and although many had gone, still the hotels were crowded. The Allee Sal, at which we resided, affords accommodation for a large number of strangers, and daily exhibits a table-d'hôte, at which about two hundred individuals sit down to dinner. Notwithstanding that few of our countrymen come to reside in this house of entertainment, we found that English was spoken here by one or two of the waiters, as it was indeed in every hotel in the whole course of our route, with only two exceptions.

In the course of the day after our arrival, having made ourselves acquainted with all worth noticing, we proceeded onwards to Ems, the last of the watering-places on our route. The road winds upward from the old village over the rounded top of one of the hills, and hence, for several miles, offers little to the view but brown heathy tracts of mountain scenery, here and there relieved by an old blue slaty village, the place of residence of a poor class of small proprietors and farmers. After ascending and descending several times, a turn of the road brings us in front of a deep and picturesque valley, from the lower extremity of which rises a woody conical mount, ornamented at top with the old Castle of Nassau. Turning to the right, on approaching this ancient ruin, the valley opens on the larger vale of the Lahn, with the small town of Nassau on the right bank of the river, opposite the castle. Standing thus at a connecting point between two valleys, and rising to the height of about three hundred feet, the castle mount is a most conspicuous object in different points of view, and assists in forming one of the most romantic and beautiful pieces of scenery in the country. From a suburb below the shadow of the woody height, we reach the town of Nassau by a handsome and modern chain bridge, which is capable of allowing two carts to pass in the breadth, besides foot passengers, and measures ninety paces in length, that being the breadth of the Lahn at the spot. Three or four centuries ago, Nassau was a place of residence for the baronial family from whom the present duke has sprung, but it is now deserted by the aristocratic splendour of these merry times, and is the picture of poverty and decay; like the little old towns on the Rhine, it is little else than a collection of habitations for agriculturists and vine-gardeners.

The road, after passing through Nassau, goes for some distance down the right bank of the Lahn, with an almost precipitous vine-clad hill above, and discloses some admirable points of view for the pencil of the draughtsman. Leaving the river, we ascend another of the huge round-backed hills, and again descending, are shortly brought back to the Lahn, and have before us, on its right bank, the very ancient town of Ems. Nowhere is there so strangely situated a town. It occupies a long stripe of ground between the side of the river and a rocky hill, which in some places is a perfectly perpendicular cliff, impending over the roofs of the houses. There is in general room for only one row of dwellings, with the road in front of them; but to afford space for promenading, there is a bridge of boats across the Lahn, leading to some beautiful woody banks opposite. Ems was known by the Romans for its mineral waters, and received from them the name of Embasis, or the Washing-Tub, which is the origin of the present appellation. It possesses several springs, both for drinking and bathing, and of different degrees of heat. Nature is so bountiful in the supplies, that 12,400 cubic feet of water issue from the ground every twenty-four hours; a quantity, however, much less than is daily expelled at Wiesbaden. Some of the springs rise in the bed of the river, and their produce is consequently lost; while of the remainder, the principal have been covered over by houses or hotels, in whose lower parts the baths are situated. The chief establishment is an old residence of the Duke of Nassau at the centre of the town. We visited some of the bathing-rooms, which were dismal-looking dungeons, steaming with vapour, and any thing but calculated to soothe the feelings of valetudinarians. Numberless cures are said to have been performed by the use of the waters, particularly among the female sex, for whose complaints they are said to be adapted; but if Dr Granville's opinion is to be taken, there is no small degree of danger in their application. "The nervous system (says he) is the first and the most seriously disturbed by these waters; and I attribute the fact in a great measure, first, to the large quantities of carbonate of soda taken daily into the system along with them; and, secondly, to the additional bad influence which the air of a narrow confined valley, and the contiguity of the lofty hilly ranges of siliceous grauwacke slate, produce in individuals already prone to nervous agitation, or irritability. Hence Ems can never suit an hypochondriac, no matter from what functional disorder his unhappy state may arise. It never can suit persons labouring under any modification whatever of disease of the heart, whether structural or merely functional. They are disturbing waters in the way of alternatives,

to a degree which is scarcely producible by means of ordinary medicines, and which, although very beneficial to some, is injurious to many, and requires under any circumstances great circumspection in the lengthened use of them. So great is the disturbance produced in the system while the waters are drunk, that I am acquainted with very few patients who have got well of their complaints during the treatment, or before they came away from Ems. Of the rest who recovered, long after they had left the spa, the major part had judiciously enough been prevailed upon to go and finish their cure at some other place—generally a cold spa."

In our ramble through Ems, we were attracted by the appearance of a slip of public garden, in which was a handsome pavilion, close by the river; and, entering the edifice, the usual gambling apparatus presented itself, with its crowd of attendants. To a native of a country in which the only attempt ever made to establish a gaming-house was at once put down by the public authorities, the frequency of this spectacle at the German watering-places becomes very distressing. It appears to him as if the opportunity of unlimited gambling were even a greater attraction to the mass of the visitors, than the waters. Instead of interfering to break up the gaming-houses, the public authorities frequently profit by their establishment. In the gambling-rooms at Ems, and other places in Nassau, we observed that regulations for the games were hung up on the walls, by order of the duke, which, at least, proves that that personage sanctions and approves of the odious practice. We are told, in a native description of Nassau, that, "by an edict of the government, all the subjects of the duke are forbid to play, and any individual holding an office under him, who is detected in playing, loses his situation." I should, from what came under my own observation, doubt that such a law is in existence; but allowing it to be as stated, what must we think of the conscientiousness of a government which, while protecting its own subjects, allows strangers to be plundered with impunity!

We must now quit not only Ems and the other brunnens of Nassau, but also the upper Rhenish country in which they are situated. A drive of little more than an hour, over a tract of hilly ground, brought us once more to the right bank of the Rhine at Ehrenbreitstein, and next morning a steamer from the opposite quay at Coblenz, carried us down the river on our way homeward. Having already described both banks of the Rhine in ascending, it will not be expected that I should here recur to the subject, further than to give some little account of Bonn, a town at which we stopped for a few hours in our descent.

Bonn is situated on the left bank of the Rhine, about twenty miles above Cologne, and at present enjoys the reputation of being the best seat of education in Prussia. The town, like Cologne and Coblenz, is surrounded with walls, and is consequently confined and wretched in its internal organisation. The streets are narrow and badly paved, and most offensive from the want of drains. So far, therefore, as physical comfort and health are concerned, the learning for which the town has obtained some celebrity, has been of no service. On visiting Professor Schlegel, I found him living in a quarter infinitely more vile in aspect than that of the lowest parts of London or Edinburgh, though, such is the influence of habit, the disadvantages of the locality do not seem to affect him.

Bonn is a town of considerable antiquity, having, like Cologne, been originally a settlement of the Romans, and in later times a seat of some important religious bodies. The most remarkable of its edifices is the Dom Kirk or Cathedral, which is in the Byzantine style of architecture, and was built some centuries ago on the site of a church erected by the Empress Helena, mother of Constantine the Great, in the year 316. In the neighbourhood of the cathedral, and verging on the southern environs of the town, stands a fine large edifice in the Grecian style of architecture, now used as one of the principal university buildings. The other chief edifice, which is used for a certain department in the course of instruction, is the ancient chateau of Poppelsdorf, situated at the extremity of an avenue of trees leading from this quarter of the town. The university of Bonn was established by the present king of Prussia in 1818, and has been placed on the most liberal footing as respects the nature of its education, while the discipline maintained among the students is allowed to be more correct than has usually been the case at other German universities. The Prussian government has at least, with its well-known regard to the instruction of youth, taken care to appoint only men of first-rate abilities to the different professorships. The faculties include theology, according to the Roman Catholic and Reformed churches, jurisprudence, medicine, literature, and physics—the latter comprehending zoology, botany, mineralogy, and chemistry. The botanical garden, which is situated near the chateau, is upon a most extensive scale, and kept in the most beautiful order. The number of students lately enrolled in the university books for one year, was nine hundred and eighty-eight, which included one hundred and ninety-two youths from countries foreign to Prussia.

In the after part of the day we went on board a steamer descending the river, and were in a short time landed on the quay of Cologne. Next day we departed from this ancient city, and pursued a westerly direction towards Aix-la-Chapelle. The road is quite uninteresting, being mostly flat, with some slight rises; it is, however, rich and arable, and

only requires capital and skill to make it produce abundant crops. Nothing that I had ever seen before, except in Ireland, equalled the apparent poverty and wretchedness of the population. The villages in which they cluster are built of mud and wattle, and have no symptoms of thriving. Nowhere as far as the eye can reach is there a single gentleman's house to be seen; the whole country seems delivered up to a race of toil-worn peasantry, from whom all hope of bettering their condition appears to be shut out. Riding through this border country of Prussia and Belgium, we first reach Berghem, a small old town with decayed walls, and next Juliers, a town surrounded with regular and strong fortifications. Thence a drive of two hours along a badly paved road brings us to Aix-la-Chapelle, situated in a valley in the midst of a district more beautiful and better enclosed than that through which we have passed.

Aix-la-Chapelle, or Aachen, as it is called by the Germans, is a town of great antiquity: its origin, indeed, is probably coeval with the first peopling of the country, for it appears to have been occasioned by certain medicinal springs which exist upon the spot. The town is celebrated as the scene of both the birth and death of the Emperor Charlemagne (742-814). In the present day, it consists of several respectable, but many more dirty and confined streets, with a population of about 38,000. Necessity, as well as inclination, led us, shortly after our arrival, to visit the Rath-Haus, or Hotel de Ville. Being the last of the towns in the Prussian league which we had to pass through, it was necessary to have our passports inspected, and stamped with the licence for departure from the kingdom. To the Hotel de Ville, therefore, which is now the police-office of the town, we proceeded to have this troublesome ceremonial performed, for here personal attendance is imperative. The edifice is a large handsome building, of stone, with elegant exterior flights of steps, and stands in a high part of the town, at one side of the open market-place. We feel, in looking upon this imposing structure, that we behold a palace in a state of degradation and neglect. The roof and walls of the spacious vestibules and corridors have been painted with historical figures and scenes, but smoke and dirt have rendered them dim and undistinguishable; a lofty room, which has been similarly embellished, is divided in two by a paltry wooden partition; and the whole interior has an air of squalid misery. Yet this edifice has been a great place in its day. In its principal saloon, important assemblages of political characters have occasionally taken place for the conclusion of great treaties; the last took place in 1818, when the emperors of Austria and Russia, with ambassadors from the Prince Regent of England and Louis XVIII., met to decide upon the evacuation of France by the troops of the allied powers.

The Hotel de Ville is said to stand on the spot where Charlemagne was born; and to preserve the recollection of that personage, a splendid fountain has been erected in the market-place in front: it is composed of a large bronze basin for receiving the water, and from the centre of the basin rises a pedestal, on which a statue of Charlemagne, also in bronze, is erected. The whole fabric was erected so long ago as 1353 (when the neighbouring Hotel de Ville was finished), and it has been kept carefully in repair since that time.

Proceeding from the open market-place down a narrow lane lined with tall dingy houses, we arrive at a low spot of ground whereon stands the ancient Cathedral—the chapel from which the town has received a portion of its name. It is impossible to make out either style or date from the appearance of the structure. It is a mass of ill-assorted parts, Gothic, Saxon, Byzantine, old and new all stuck in a heap. Such at least is the exterior. The interior of the building is chiefly remarkable for an octagonal nave with tall rounded arches, which forms the most ancient of the various parts of the motley structure, having been built by Charlemagne in 796 as a chapel for his place of sepulture, on the model of the Holy Sepulchre at Jerusalem. It was afterwards partially destroyed by the Normans, but was restored by the Emperor Otto III. about the year 1000; its age is, therefore, at least between eight and nine hundred years. Charlemagne was entombed, according to his request, in a vault below the centre of the dome, but here his remains do not repose till the present day.

Had this monarch contented himself with going down into the dust like the rest of his fellow-creatures, he would have stood a fair chance of being left to dissolve into the original elements of humanity. Unfortunately, however, for his posthumous repose, he chose to be buried in all the magnificence of his robes of state, and sitting upon a throne, as if still, though in his dreary dungeon tomb, ruling the destinies of half the world. It was not in the nature of things that his majesty should be allowed to sit for ever in this condition of costly splendour. Otto III., emperor of Germany, visited the spot, probably at the time he ordered the restoration of the edifice, and causing the tomb to be opened, there found the skeleton of Charlemagne sitting on the throne on which it had been placed at his death in 814. A lapse of nearly two hundred years had not materially disfigured the gay ornaments in which the dead monarch was invested. On the fleshless skull there was stuck a crown which he had worn during life; a sceptre was fastened in his right hand; a jewelled mantle of state was thrown over his shoulders; a copy of the gospels was

carefully placed upon his knees; a sword was buckled to his side; and to his girdle was hung the pilgrim's pouch which he had borne when alive as a token of Christian piety. Otto forthwith removed these valuable insignia of royalty, to be used at the coronations of the emperors of Germany. The tomb was again shut up after this spoliation, and it remained closed till the year 1165, when Frederick Barbarossa, moved by curiosity and piety, ordered it to be opened in presence of the bishops of Liege and Cologne, and caused the body to be removed, and placed in a splendid sarcophagus prepared for the purpose; at the same time the throne, or all that remained of it, consisting of a chair of white marble, was brought up to the church, where it is now preserved with much care, and exhibited to strangers. Although the body of Charlemagne was thus, to all appearance, stored safely away, it was destined to be again handled and disturbed. At what period it was taken from the sarcophagus, is not told by any authority, but it is certainly gone, as the empty sarcophagus testifies. In all probability it has been dispersed in the form of relics, a leg in one place, an arm in another, and so on with all the other members. I understand that the only fragments remaining in the reliquary of the cathedral, are the skull and an arm bone, but during my somewhat hurried visit, I had not an opportunity of seeing them.

At a short distance south from the cathedral, in the lower part of the town, we find the chief street of fashionable parade in Aix. Here are situated the principal mineral springs, and the rooms and arcades which cover them. The waters are sulphureous, warm, and nauseous, both to the sense of smell and taste. One of the hottest of the springs is so abundant that it cannot all be used for drinking and bathing, and is therefore allowed to escape for the benefit of the lower class of inhabitants, who wash all their clothes with it; and as it is alkaline, they have no need for soap. Adjoining the water-drinking and bath rooms, stand some magnificent hotels and gambling-houses. One of the latter, called the New Redoute, ranks as the most splendid and profligate of all the establishments of the kind on the continent. Gamblers flock hither from France, England, and most other countries in Europe, and the sums lost and won at the tables exceed all calculation. Aix-la-Chapelle is the only place within the Prussian dominions in which gambling is licensed or allowed. A number of years ago, the public authorities, shocked with the misery and depravity arising from the practice, endeavoured to prevent it from being carried on within the town. The consequence was, that a small village, named Bocette, sprang up in the environs, to which all the inveterate gamblers, with their tables, resorted; and as Bocette has also hot springs, visitors began to prefer it to Aix. After a time, the town authorities relaxed, and the present elegant gambling-houses have been erected, and placed under some kind of regulations, one of which is, that a portion of all winnings, by the keepers of the tables, shall be devoted to the embellishment of the town.

#### EDUCATION IN INDIA.

The widest of all the fields of human improvement now disclosing themselves to the consideration of thoughtful men, is that which is afforded by the British possessions in India. In the extensive regions of Hindoostan, over which the East India Company, conjointly with our government, exercise a control, there are at the very lowest computation a hundred millions of human beings. These are of various races, speak different languages, and have attained different degrees of intelligence. They are also of different religions, principally Mahomedan and Hindu; but, practically, the religious belief in either way is little else than a mass of superstition and absurdity. To improve this numerous and interesting family of mankind, some benevolent efforts have been made within the last twenty or thirty years; unfortunately, however, for want of a just knowledge of the very critical nature of the habits of thought, and deeply rooted prejudices of the natives, comparatively little good has been effected. One great error has consisted in an attempt—well meant, no doubt—to proselytise to Christianity, before opening the mind by instruction in simple secular knowledge. It is time that this profound mistake should be corrected. The bulk of the lower orders are as ignorant as children, while the higher castes are pridefully encased in the mysteries of their own faith, and have, generally speaking, resisted all that has been done to bring them within the pale of the gospel.

It may be known to most of our readers that the melioration of the condition of the native tribes of India was an object which Lord William Bentinck had earnestly at heart, during his government of that country, and that he actually carried into execution a law to prevent widows from devoting themselves to the flames on the funeral pile of their deceased husbands. We have now to make generally known, perhaps for the first time in this country, a great educational project, which occurred during his lordship's government. This was prefaced by the collection of information throughout the provinces of Bengal and

Behar regarding the state of popular education. The gentleman entrusted by the governor-general and his council with making the required investigations, was Mr William Adam, who commenced operations in January 1835. From this period Mr Adam was engaged in prosecuting his very laborious duties till June 1838, when he laid before government his third and concluding Report, which was forthwith ordered to be printed at the Bengal Military Orphan Press in Calcutta. By an accidental circumstance, a copy of this work now lies before us, and we shall endeavour to gather and arrange a few important particulars from its pages.

Travelling from district to district, and assisted by a suite of intelligent sub-investigators acquainted with the localities, Mr Adam collected a large body of minute statistical facts regarding the manners and the intellectual state of the people. The first part of his evidence consists of an account of the schools of native origin and growth. It appears that India is very far from being destitute of schools. In all the towns there are a number of schools of different kinds, suited for the various races and castes, from the lowest to the highest, and in most villages there are schools of a humbler order for the rural population, who speak only the vernacular tongue. Let us take, as an example, Mr Adam's account of the state of instruction in the city and district of Moorsheadabad. "In 20 thanas [police subdivisions] of this city and district there are 67 vernacular schools, of which 62 are Bengali and 5 Hindi. There are eleven villages, mohallas, or bazars, containing each two vernacular schools, or twenty-two in all, of which twenty are Bengali, and two Hindi. The remaining forty-five are found each in a different village or mohallah. The number of teachers is the same as the number of schools," and they belong to eleven different Hindu castes. "Besides these, there is one Bengali school taught by a Mussulman. To teach reading, writing, and accounts, is considered the proper duty of the Kayastha, or writer-caste; and a Brahmin, a Vaidya, or a Kahastriya, is supposed to degrade himself by engaging in such an occupation, while, on the other hand, any of the castes inferior to the Kayastha acquire by the same means increased respect. Persons of good caste do not hesitate to send their children to schools conducted by teachers of an inferior caste, and even of a different religion. Of these teachers there are five who give their instructions gratuitously, of whom two are family priests, one is a weaver, and another a retail-dealer. One of the priests, although he receives no fixed payment either in the form of monthly wages from the parents, or in the form of fees for each scholar, accepts at the period of the great annual festival, or Durga Puja, a present of uncooked rice, pulse, salt, oil, vegetables, wood, cooking utensils, &c.; and the weaver, though he does not exact any fees from his scholars, receives what they offer him. His school was opened only about a month before I visited the district, and he had received within that time ten pice from the different scholars to aid him in bearing incidental expenses. By day he works as a weaver for his livelihood, and teaches in the evening. There are also many cases in which paid teachers instruct a greater or less number of their scholars gratuitously. It gives me great pleasure to mention these instances of unostentatious benevolence in the humblest ranks of native society. They prove both the merit attached to the communication of knowledge, and the readiness to receive instruction on the part of many who can offer no compensation for it. A people amongst whom such dispositions are found, presents both materials to work upon, and good instruments to work with."

The majority of teachers, as we are told, receive each from four to five rupees (9s. to 10s. 6d.) per month as their entire remuneration, and the school-houses are sometimes on the most primitive scale. "In a majority of instances there is no school-house, in which case the house of the teacher, a family or village temple, an outhouse of one of the parents, the hut assigned for the entertainment of travellers, the corner of a shop, the portico of a mosque, or the shade of a tree, is employed for the purpose. Regarding the school-houses of the district of Beerbhoom, I shall transcribe only a few of my notes. In one village the school-house was built by the teacher at a cost of money of Rs. 1-4 [we suppose something like half-a-crown] with the aid of his pupils, who brought the materials from the jungle. In another, the school-house was built by the scholars at a cost of Rs. 1-3, in addition to their own labour. The house is thatched, and the walls consist of branches and leaves of the palm and sal trees interlaced. In a third, the scholars assembled in the village place of worship, and they were engaged in building a school-house with thatched roof, beams, and rafters, and mud walls, which was expected to cost in all about ten rupees, besides their labour. Several school-houses are noted as having been built by subscription among the parents. The temples consecrated to Yama, the Judge of the departed—the Minos of Hinduism—I have found frequently used as school-houses in this district, in consequence of the extent to which the worship of that deity prevails."

With respect to the instruction communicated in these rude seminaries, it is, as may be supposed, very small. To acquire the art of keeping commercial and agricultural accounts, is the principal object. Speaking of what is taught in Moorsheadabad, Mr Adam observes: "In the only Hindi school in which vernacular



cular works are used, those works are the *Dan Lila*, and *Dadhi Lila*, both describing the amusements of Krishna, the former his boating pleasures on the Jamna, in the neighbourhood of Brindavan, and the latter the tricks he played the milkmen in that place with his youthful companions. In only one Bengali school, the *Guru Bandana* was found in use, a doggerel composition containing an expression of the respect and devotion due from the scholar to his teacher. The arithmetical rules of *Subhakar* were employed in thirty-two schools. The *Guru Dakshina*, another doggerel composition, which is sung by the elder boys of a school from house to house to elicit donations for their master, was taught in three schools. In addition to these vernacular works, a small portion of [the learned language of India] the Sanscrit vocabulary of *Amara Singh* was found to be in use in one Bengali school; in another, a work called *Sabda Subanta*, containing the rules of Sanscrit orthography, the permutations of letters in combination, and examples of the declension of nouns; and in 14 schools, the Sanscrit verses of *Chanakya*, containing the praises of learning and precepts of morality, were read or committed to memory." He afterwards says—"The remaining works used in the common schools rank low as compositions, and consist for the most part of the praises and exploits of the gods recognised by the established religion of the country."

In the various common schools the languages used are the vernacular tongues of the different races, being "chiefly Bengali in the Bengal, and Hindi in the Behar districts. In Burdwan, Bengali, and in South Behar, Hindi, are exclusively used; but in Mednapore, Uriya is largely employed as well as Bengali; in the city of Moorsheadabad, and in the district of Beerbhoom, Hindi is used to a very limited extent in addition to Bengali; and in some parts of Tirhoot, Trihutia, in addition to Hindi, prevails as the language of conversation, of verbal instruction, and of correspondence, but is never employed as the language of literary composition."

Next above the vernacular schools, are those in which the Sanscrit language is employed for the purpose of communicating a knowledge of literature, law, philosophy, and the Hindu religion. In twenty thanas of the city and district of Moorsheadabad, there are 24 Sanscrit schools, all taught by Brahmins—of which 13 are of the sect Varendra, 8 Barhi, and 3 Vaidika. The teachers of this class of schools are partly paid by small native endowments and partly by fees, their remuneration being greater than is received by teachers in the vernacular seminaries. There is not any mutual connection or dependence between vernacular and Sanscrit schools. "The former are not considered preparatory to the other, nor do the latter profess to complete the course of study which has been begun elsewhere. They are two separate classes of institutions, appropriate to distinct classes of society—the one for the trading and agricultural, and the other for the religious and learned classes. They are so unconnected that the instruction in Bengali and Hindi reading and writing, which is necessary at the commencement of a course of Sanscrit study, is seldom acquired in the vernacular schools, but generally under the domestic roof; and unless under peculiar circumstances, it is not extended to accounts, which are deemed the ultimate object of vernacular school instruction."

The class of institutions next in importance are the schools in which the Persian and Arabic languages, and the learning they contain, are taught. In 20 thanas of the city and district of Moorsheadabad, there are 17 Persian and 2 Arabic schools, the teachers being with one exception Mussulmans. It is gratifying to find that among the Mahomedan teachers of this set of institutions, much generosity is displayed in the free communication of knowledge such as it is. In the district of Burdwan, we are told that "twenty-two teachers instruct gratuitously, and of that number six also support and clothe the whole or part of their scholars. I have not found any instance in which Hindu students receive from a Mussulman teacher or patron any thing beyond gratuitous instruction. Thus, in one instance, a Maulavi gratuitously instructs seven Hindu scholars; but in addition to gratuitous instruction, he gives also food and clothing to eleven Mussulman students; in another, a Maulavi gratuitously instructs two Hindu and six Mussulman students, and he gives also food and clothing to five other Mussulman students."

Mr Adam found the following works in use in the Persian schools (we omit the hard original titles)—an elementary work, a vocabulary, dialogues, a grammar, forms of correspondence, modes of address, the poems of Hilali and Kalim, an account of one of the kings of the Deccan, tales, names and attributes of God, the doctrines of Islam, and a work on medicine. In the Arabic schools, he found in use treatises on inflection, syntax, logic, rhetoric, natural philosophy, the elements of Euclid, on astronomy, on the law of inheritance, and on the doctrines of Islam.

There is also a class of seminaries, which may not inaptly be termed family schools, being formed simply of the children belonging to particular families of the more affluent order. The number of families in the city of Moorsheadabad in which domestic instruction is given, is 216, of which 147 are Hindu and 69 are Mussulman families. The number of children instructed in each is only two or three.

The number of schools in which English is taught is very limited, and they are chiefly conducted by

missionaries, who can spare little time to instruct their pupils. It is a circumstance not a little extraordinary, that in most districts there are few or no schools supported or encouraged by the numerous and frequently wealthy European residents. "Every Englishman (says Mr Adam) lives and toils to amass a fortune; no passion is so strong or so pervading. The people, in the meantime, whose labour gives revenue to the state and wealth to the individual, are degraded by ignorance and poverty, and the obligation to instruct and elevate them is sometimes wholly denied, and in all cases is feebly felt and acknowledged."

Having detailed the special facts which he gathered throughout the districts he visited, Mr Adam proceeds to sum up the result of his inquiries. The amount of population of which an educational survey was made, so as to afford the basis of a correct inference, was 7,789,152; and the estimated additional population to which the inference may be extended, is 27,671,250, together amounting to 35,460,402, being that portion of the Indian population which has lived longest under British rule, and which should be prepared or preparing to appreciate or enjoy its highest privileges. It is estimated on the fairest evidence, that of the adult portion of this population, in the district where education is most abundant, only 9 per cent. have received instruction of any kind, even of the most insignificant description; while in a district less favourably situated, the proportion of the instructed adult population is shown to be less than 2½ per cent. In the same districts, of the juvenile population, that is, of the population between 5 and 14, in the one only 16 per cent. are receiving instruction, and in the other exactly 2½ per cent., leaving the rest wholly un-instructed. What may be the scope for a system of rational instruction in the other portions of our Indian empire, may be partly guessed from these results, though into this question Mr Adam prudently does not enter.

From all that has ever been told in England regarding the population of India, it has been made to appear that they were in general studiously opposed to instruction, and even to social intercourse with Europeans. There has been in this either some misapprehension or exaggeration. Mr Adam now discloses the fact—and this is the most valuable fact in his book—that the general population of Bengal and Behar, of high and low caste, are zealously anxious for instruction: they cry for it, they would receive it as the greatest of earthly blessings. Speaking of the tone of feeling of the lower castes on this subject, the author remarks—"They are gaining ground, and are almost imperceptibly acquiring a sense of the value of even the humblest instruction which is within their reach, but from which, by the customs of society, they were formerly almost debarred. The time is not distant when it would have been considered contrary to all the maxims of Hindu civilisation, that individuals of the *Malu*, *Chandal*, *Kahar*, *Jalia*, *Laharia*, *Bagdhi*, *Dhoba*, and *Muchi* castes, should learn to read, write, and keep accounts; and if some aged and venerable Brahmin who has passed his whole life removed from European contamination, were told that these low castes are now raising their aspirations so high, he would deplore it as one of the many proofs of the gross and increasing degeneracy of the age. The encroachment of these castes on the outskirts of learning is a spontaneous movement in native society, the effect of a strong foreign rule unshackled by native usages and prejudices, and protecting all in the enjoyment of equal rights."

It further appears from these valuable researches, that the native learned men of India, the class of influential literati among the higher castes, who have been hitherto wasting their energies on absurd and vicious fictions, have professed to Mr Adam "their readiness to engage in any sort of literary composition that would obtain the patronage of government. Instead of regarding them as indolent, intractable, or bigoted in matters not connected with religion, I have often been surprised at the facility with which minds under the influence of habits of thought so different from my own, have received and appreciated the ideas which I have suggested. Nor is it authors only who might be employed in promoting the cause of public instruction: it is probable that the whole body of the learned, both teachers and students, might be made to lend their willing aid towards the same object."

Our quotations have run to such a length that we have left ourselves little room to notice the arrangements proposed by Mr Adam, in conformity with instructions given to him, for the improvement and extension of public instruction in Bengal and Behar. The leading feature of his plan is, that any thing to be done must be based on the present varied organisation of native schools; in other words, aiding the schools already in existence, and establishing new schools only where there is a total destitution with respect to public instruction. The whole race of native schoolmasters, ignorant as many of them are, must be conciliated. And no attempt whatsoever must be made upon the settled religious prejudices of any class of natives. Upon the supposition that the existing external arrangements are not to be altered, it is conceived that little trouble or expense would be incurred in the establishment of means for improving and supervising. Exclusive of the salary of a general examiner, small payments to teachers, and rewards to scholars, the principal expense would be incurred for school-books. These treatises, ac-

cording to Mr Adam, should form a series of four in number, and be printed in the Bengali and Hindi languages. The first to include all that is at present taught in scattered and disjointed portions in the vernacular schools; and to be a text-book for instruction in writing on the ground, on the palm leaf, and on paper; also to be a manual for accounts. The second book to explain the most important arts of life that contribute to comfort, improvement, and civilisation, and to give elementary views of the sciences which have produced and helped to perfect them; trade and the subdivisions of manual labour; manufactures and the use of machinery; and above all, the best modes of agriculture. The third book to be explanatory of the moral and legal relations, obligations, and rights, whether personal, domestic, civil, or religious, of men living in a state of society, and under the existing government. And the fourth book to be of a superior order on physical geography, history, and astronomy. It is confidently believed by Mr Adam, and all who have personally investigated the subject, that the universal inculcation of secular knowledge of the description mentioned in these books, would, at no distant period, put quite a new face on the intellectual condition of India. The minds of the natives being awakened and elevated, they would be prepared to throw off the mass of superstition which now presses upon them, and be favourably disposed to listen to the prelections of those missionaries of Christianity who would seek to engage their attention. However this view of the case may be received in Britain, it is satisfactory to know that it has met with the approbation of all classes of Christians in India.

We have now presented a superficial sketch of what is proposed to be done, in order to carry out this great project of human improvement. All that remains to be desired is the cordial co-operation and assistance of the British government. There is, it seems, no lack of funds in India to prosecute the good work, provided they are rightly applied; at least, not much more is wanting. May we trust that not only the executive government, but the people at large, will promptly exert themselves in a cause of such immense importance. In the language of Lord Moira, "To be the source of blessings to the immense population of India, is an ambition worthy of our country. The field is noble. May we till it worthily!"

#### VOLCANIC ISLAND IN THE MEDITERRANEAN.

THE heaving up of volcanic matter from the bottom of the sea to such a height above the surface of the water as to form an island which may be safely trodden, is a rare and interesting occurrence. That such things frequently happened at a former, and probably an early period of the earth's history, is quite evident from the great number of islands which are found to be of volcanic origin; but an event of this description taking place in our own times, is calculated to fix attention, as much from its novelty as from its extraordinary nature. In July 1831, an island was thrown up between Sicily and Pantellaria, in the following remarkable manner. About the 10th of July, a column of water, like a water-spout, sixty feet in height, and afterwards a cloud of vapour, were observed rising from the sea, at the place where the island afterwards made its appearance. No fire was seen until the 17th, when the master of a London brig was able to distinguish flame; and it is probable that at this period the land began to emerge from the water. On the night of the 18th, flashes of brilliant light, mingled with smoke, were distinctly visible by the light of the moon; and so remarkable were the appearances, as to induce the commander of one of his majesty's ships to steer for the spot, for the purpose of examining them more closely. A large column of smoke was seen towering above the sea to a considerable height, and from the midst of it pillars of lurid fire shot up, and then subsided, the column which was formerly dark gradually becoming white. This alternation of eruption and repose, of white and black, continued during the whole night. On the following morning a small hillock of a dark green colour was seen rising a few feet above the surface of the ocean, but it continued only visible at intervals between the more violent eruptions. The volcano was in a constant state of activity, and appeared to be discharging dust and stones, together with vast quantities of steam. On soundings being taken, no bottom was found till those who made the experiment were within twenty yards of the island. The form of a crater was now clearly discernible. It seemed to be composed of fine cinders and mud of a dark brown colour; and within it was described, during the pauses of the eruptions, a mixture of muddy water, steam, and cinders, dashing up and down, and occasionally running over the sides into the sea. All this time showers of hot stones or cinders shot upwards a few yards, and then fell into the gulf whence they were ejected. One of the eye-witnesses observes regarding these eruptions:—"No words can describe their sublime grandeur; their progress was generally as follows:—After the volcano had emitted for some time its usual quantities of white steam, suddenly the whole aperture was filled with an enormous mass of hot cinders and dust, rushing upwards to the height of some hundred feet with a loud roaring noise, then falling into the sea on all sides with a still louder noise, arising in part, perhaps, from the formation of prodigious quantities of steam which instantly took place. This steam was at first of a brown colour, having embodied a great deal of the dust; as it

rose, it gradually recovered its pure white colour, depositing the dust in the shape of a shower of muddy rain. While this was being accomplished, renewed eruptions of hot cinders and dust were quickly succeeding each other; while forked lightning, accompanied by rattling thunder, darted about in all directions within the column, now darkened with dust, and greatly increased in volume, and distorted by sudden gusts and whirlwinds. The latter were most frequent on the lee side, where they often made imperfect water-spouts of curious shapes. On one occasion some of the steam reached the boat; it smelt a little of sulphur, and the mud it left became a gritty sparkling dark brown powder when dry. None of the stones or cinders thrown out appeared more than half a foot in diameter, and most of them were much smaller."

At this time the island was from fifty to ninety feet in height, and about three quarters of a mile in circumference. It attracted great attention as soon as the fact became known, and Captain Swinburne was dispatched in a cutter to ascertain the exact position of the island. This commander effected a landing on the 3d of August, hoisted the British ensign, and called it Graham Island. We subjoin a description of the volcano in nearly his own words:—"Seizing a favourable moment, we gave way with our oars. Our distance was rather greater than we could have wished, but we proceeded as quickly as the sea would allow. As we approached, some occasional jets were thrown up, but of little consequence; and a current was discovered running to the westward, and setting us farther to the right than we desired. Within twenty yards of the shore, the water appeared shoal, and the sea broke; but as there was no appearance of surf on the beach, we kept steadily on till the boat struck the ground. The union jack was then planted; such observations were made as the pressure of circumstances and the imminent danger of a fresh eruption every moment would admit of; a bucketful of the materials of which the island seemed chiefly composed was collected; and we re-embarked. The form of the crater is nearly a perfect circle, and complete along its whole circumference, excepting for about two hundred and fifty yards on the south-east side, which are broken and low, not apparently above three feet high. The height of the highest part I supposed by the eye to be about one hundred and eighty feet. The outer diameter is, I think, almost six hundred and forty yards, and the inner about four hundred. The whole circuit of the island I conceive to be from a mile and a quarter to a mile and one third. The fragments brought away are compact and heavy, and the whole surface of the island is dense, and perfectly hard under the feet. No variety of stones were procured, nor any lava; neither did I see any jets or streams of lava while on the island. All the fragments were very hot when collected; and I thought the temperature of the sea close to the shore somewhat higher than farther out, although of this I was not very certain. The latitude of the island is 37 degrees 11 minutes north, the longitude 12 degrees 44 minutes east of Greenwich."

The island went on increasing in size, and, according to some accounts, was in a few days above two hundred feet in height, and three miles in circumference. After attaining this, its maximum magnitude, it appears to have been gradually reduced by the action of the waves, for on the 25th of August it was only two miles round, and on the 3d of September it was no more than three-fifths of a mile in circumference, whilst its greatest height did not exceed one hundred and seven feet. It appears that the volcanic matter, during its ejection, had found a second vent at no great distance from the surface, for in the month of August a great ebullition and agitation of the sea occurred, accompanied by the constant ascension of a column of dense light-coloured steam. By the end of October, not a vestige of the crater remained, and, with the exception of a small heap of sand and scoriae, the whole island was nearly on a level with the sea. In short, it at length entirely disappeared, and a dangerous reef, of an oval figure, three-fifths of a mile in extent, now occupies the submarine site of Graham Island. Towards the end of 1833, Captain Swinburne (the same who had planted the British flag upon the island to so little purpose) found, in the centre of the reef, a black rock, about twenty-six fathoms in diameter, and from nine to eleven feet under water. Around this rock were banks of black volcanic stones and loose sand. The rocky mass in the centre is supposed to be solid lava, which ascended in the principal crater; and as at some little distance there was discovered a second shoal, this, with great probability, is conjectured to be the site of the second cone, where the submarine eruption took place in August. It appears then, as Professor Lyell observes, that a hill eight hundred feet or more in height (the depth of water here being six hundred feet) was formed by a submarine volcanic vent, of which the upper part (only about two hundred feet high) emerged above the waters so as to form an island. This cone must have been equal in size to one of the largest of the lateral volcanoes on the flanks of Etna, and about half the height of the mountain Jerullo in Mexico. In the centre is a great column of solid lava, supposed to fill the space by which the gaseous fluids made their escape; and on each side is a stratified mass of scoriae and fragmentary lava. The solid nucleus of the reef where the black rock is now found, withstands the movements of the sea; while the loose matter, which remained longest visible, was gradually washed away by it. Subsidiary craters are by no means rare near

the summit of a large cone, and one of these appears to have been formed in the case of Graham Island; a vent, perhaps, connected with the main channel of discharge, which gave passage, in that direction, to elastic fluids, scoriae, and melted lava. It is not known whether lava overflowed from either vent, but it is quite possible that melted rocks may have run down the sides of the cone, as often happens on land, and have spread in a broad sheet over the bottom of the sea. There are some remarkable facts connected with this phenomenon. About a fortnight before the eruption was visible, Sir Pulteney Malcolm, in passing over the position of the volcano in his ship, experienced several severe shocks, as if he had struck on a sandbank, and which he attributed to an earthquake. The same shocks were felt on the west coast of Sicily. A circumstance still more worthy of notice is, that there is a tradition at Malta, of a volcano existing on the same spot about the commencement of the last century; and there is extant an old chart of the Mediterranean, which lays down a shoal, with only four fathoms of water on it, and called Larnour's Breakers, within a mile of the same latitude and longitude. Not long before the event took place, a naval officer, in surveying this part of the Mediterranean, found a depth of more than one hundred fathoms' water on the spot, where there is now only about ten feet.

There are other modern instances of the formation of islands by submarine eruptions, as that of Sabrina, in the year 1811, off St Michael's, one of the group of islands called the Azores; but no occurrence of the kind has attracted so much attention, or been so minutely described, as the appearance and disappearance of Graham Island.

#### THE SCOTTISH WIDOW'S LAMENT.

Afore the Lammass tide  
Had dunn'd the birkie tree,  
In a' our water side  
Nae wife was blest like me;  
A kind gudeman, and twa  
Sweet bairns were 'round me here;  
But they're a' ta'en awa  
Sin' the fa' o' the year.

Sair trouble cam' our gate,  
And made me, when it cam,  
A bird without a mate,  
A ewe without a lamb.  
Our hay was yet to maw,  
And our corn was to shear,  
When they a' dwin'd awa  
In the fa' o' the year.

I downa look a-field,  
For aye I trow I see  
The form that was a bield  
To my wee bairns and me;  
But wind, and wet, and maw,  
They never mair can fear,  
Sin' they a' got the ca'  
In the fa' o' the year.

Aft on the hill at e'en  
I see him 'maug the ferns,  
The lover o' my teens,  
The father o' my bairns near:  
For there he plaid I saw  
As gloamin' aye drew near—  
But my a' now awa  
Sin' the fa' o' the year.

Our bonnie rigg theirel'  
Reck' my wae to mind,  
Our pair dumb beasties tell  
O' a' that I hae tynd;  
For whae our wheat will saw,  
And whae our sheep will shear,  
Sin' my a' gae'd awa  
In the fa' o' the year?

My hearth is growing cauld,  
And will be cauldier still  
And sair, sair in the fauld  
Will be the winter's chill;  
For peas were yet to ca',  
Our sheep they were to smear,  
When my a' dwin'd awa  
In the fa' o' the year.

I little whiles to spin,  
But wae, wae patten' feet  
Come rinnin' out and in,  
And then I just mawn greet:  
I ken it's fancy a',  
And faster rows the tear,  
That my a' dwin'd awa  
In the fa' o' the year.

Be kind, O hearn's abuse!  
To ane sae wae and lane,  
And tak' her handwarms sune,  
In pity o' her mane;  
Lang ere the March winds blaw,  
May she, far far frae here,  
Meet them a' that's awa  
Sin' the fa' o' the year.

—*Scotman newspaper.*

#### CIRCUMSTANCES WHICH PREVENT THE CORRECT NARRATION OF EVENTS.

Upon scarce any occasion do the witnesses of a perturbed, violent, and agitated scene, agree minutely in narrating what has passed before their eyes; and there often exist circumstances of discrepancy, which, nevertheless, are not considered as affecting the general truth and consistency of the evidence. The truth is, the surprise or shock which the mind receives when an individual witnesses any thing very extraordinary, has an operation in preventing exact circumstantial recollection of what has passed; and the witness, insensibly on his own part, in the detail of minute particulars, extremely apt to substitute the suggestions of imagination for those of recollection.—*Genius and Wisdom of Sir Walter Scott.*

#### TOBACCO-SMOKING.

THE following amusing observations on this practice occur in Mr Matthew's "Emigration Fields," a volume just published:—"Sucking tobacco smoke has become so general, and is indulged in to such excess, as must have a powerful effect upon the destinies of the species. In the north and east of Europe it has increased to such a degree as to act as a considerable population check; and I would desire to introduce it to the notice of our Malthusian philosophers."

The disposition or desire to suck, is no doubt instinctive—a baby reminiscence—and increased in the north of Europe, by the practice of sucking their male children too long. It is pity that this disposition or instinct to suck were not made subservient to some good, and that so much combustion did not extend to the diffusion of heat and light as well as smoke—that it could not be made to warm their cold bosoms to freedom, or enable them to illuminate the 'dark side of nature,' instead of veiling it further by transcendental cloud. Our Eastern neighbours are no doubt indebted to the demon of the 'accursed weed,' set loose by the combustion, for their dreamy philosophy, and their philosophic submission to despotic government. At the present time the weed-demon is the engrossing god of their idolatry. Although tobacco-smoking has not so immediately obvious an effect upon the system as drinking intoxicating liquors, yet from its influence being in more general and constant operation, it has comprehensively, as regards the species, a more powerful impression to disorder the brain mechanism, and derange the flow of the galvanic nervous currents, on which depends the character of our intellectual essence and organic frame. It is impossible to raise the veil from futurity; but notwithstanding the discovery of printing, instead of a progression to a superior nature, a condition of imbecility and degradation is yet in store for man—nay, even a sinking in the scale of being, unless means are taken to subvert the worship of the weed-demon. It is rather surprising that our New Zealand missionaries have allowed themselves to be hoodwinked by the subtle fiend, and made subservient in spreading his abominable rites.

In New South Wales, in the case of convict-slavery (the most pitiful condition of all), where civilised man is subjected to the thrall of his fellow-man, and where the feeling of degradation is embittered by the sting of guilt, tobacco-smoking may be necessary. It is even said that great numbers of the convicts would commit suicide, or take to the bush, if they did not receive tobacco to drown conscience and thought. Tobacco-smoking is a means of soothing misery and repressing energy, by inducing a dreamy stupefaction."

#### ATTENTION TO LITTLE THINGS.

COLONEL MACERONI, among his "Seasonable Hints," in the *Mechanics' Magazine* for January 1836, states that he has had only three pairs of boots for three years, and he thinks he shall not want any more for five years to come. And why? Why, because he has studied out a preserving preparation, suitable to the leather, and applied it in a suitable manner. Now, is there no use in that, brother mechanic? A little matter I know it is. Life, and the comforts of it, and the expense of it, and the use of it too, are all made up of little matters. The ocean and the land are made up of little matters—drops of water and particles of dust. I come every way, in a word, to one and the same conclusion. The mechanic, to conduct his business to advantage, or to live like a decent human being, to enjoy health and strength, to do justice to himself or family—to be, in a word, a comfortable, a respectable, or a useful person—must not be an ignorant or an inattentive man; and the more he knows and studies of the right sort of knowledge, the better it will be. This he must do for himself. Other men may do something for him. They have done a great deal, as I have shown. But they have not done, they cannot do all; no, nor the best part. A man's mind, like his eating and breathing, belongs to himself; and I should be as sorry to have my thinking done by my neighbour, as to have him eat up all my bread and potatoes, when I am as hungry as he is. I do not know why Colonel Maceroni, or anybody else, should have the better of me or my reader in that affair of the boots. I advise you to see to it, at any rate. And do you ask what is the colonel's recipe? I'll tell you what mine is. Go, see for yourself, my good friend. You might have invented it as well as he; but as you have not, do the best you can: read it, remember it, and practise it. Do the same in other matters. Keep a bright look-out. Take care of yourself. Mind your business. See, hear, read, think; and, my life on it, you'll come out as well as Colonel Maceroni.

There is a great deal which passes for luck, which is not such. Generally speaking, your "lucky fellows," when one searches closely into their history, turn out to be your fellows that know what they are doing, and how to do it in the right way. Their luck comes to them because they work for it: it is luck well earned. They put themselves in the way of luck. They keep themselves wide awake. They make the best of what opportunities they possess, and always stand ready for more; and when a mechanic does thus much, depend on it, it must be hard luck indeed if he do not get, at least, employers, customers, and friends. "One needs only," says an American writer, "to turn to the lives of men of mechanical genius to see how, by taking advantage of little things and facts which no one had observed, or which every one had thought unworthy of regard, they have established new and important principles in the arts, and built up for themselves manufactories for the practice of their newly discovered processes." And yet these are the men who are called the lucky fellows, and sometimes envied as such. Who can deny that their luck is well earned? or that it is just as much in my power to "go ahead" (as the Yankees say) as it was in theirs.—*From an excellent little book, called Hints to Mechanics.*

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